



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/575,150

12/21/2006

Hermann Gmeinder

30815/28752

9286

4743 7590 06/29/2010
MARSHALL, GERSTEIN & BORUN LLP
233 SOUTH WACKER DRIVE
6300 WILLIS TOWER
CHICAGO, IL 60606-6357

EXAMINER

KIM, HEE-YONG

ART UNIT

PAPER NUMBER

2621

MAIL DATE

DELIVERY MODE

06/29/2010

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/575,150	Applicant(s) GMEINDER ET AL.	
	Examiner HEE-YONG KIM	Art Unit 2621	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 April 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-28 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 April 2006 is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>7/17/2006</u> . | 6) <input type="checkbox"/> Other: _____ |

Art Unit: 2621

DETAILED ACTION

Specification

1. The following guidelines illustrate the preferred layout for the specification of a utility application. These guidelines are suggested for the applicant's use.

Arrangement of the Specification

As provided in 37 CFR 1.77(b), the specification of a utility application should include the following sections in order. Each of the lettered items should appear in upper case, without underlining or bold type, as a section heading. If no text follows the section heading, the phrase "Not Applicable" should follow the section heading:

- (a) TITLE OF THE INVENTION.
- (b) CROSS-REFERENCE TO RELATED APPLICATIONS.
- (c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT.
- (d) THE NAMES OF THE PARTIES TO A JOINT RESEARCH AGREEMENT.
- (e) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A COMPACT DISC.
- (f) BACKGROUND OF THE INVENTION.
 - (1) Field of the Invention.
 - (2) Description of Related Art including information disclosed under 37 CFR 1.97 and 1.98.
- (g) BRIEF SUMMARY OF THE INVENTION.
- (h) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).
- (i) DETAILED DESCRIPTION OF THE INVENTION.
- (j) CLAIM OR CLAIMS (commencing on a separate sheet).
- (k) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).
- (l) SEQUENCE LISTING (See MPEP § 2424 and 37 CFR 1.821-1.825. A "Sequence Listing" is required on paper if the application discloses a nucleotide or amino acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).

Claim Objections

2. **Claim 12** is objected to under 37 CFR 1.75(c) as being in improper form because it depends on any preceding claim 1-11. For the prosecution of the application, it is assumed that it depends on claim 1.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. **Claims 1-28** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

5. Regarding **claims 1, 12, 14, 16, and 19**, they recite “and/or” which is indefinite.

For the prosecution of the application, the examiner interprets it as “or”.

The remaining claims are dependent on at least one of the above claims. Therefore they are rejected too.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. **Claims 1-5, 7, and 12-14** are rejected under 35 U.S.C. 102(b) as being anticipated by Cooper (US 2002/0,067,407), hereafter referenced as Cooper.

Regarding **claim 1**, Cooper discloses Universal Docking Systems in a Dental Operatory. Cooper specifically discloses Interface unit for employment at a dentist's or

Art Unit: 2621

dental treatment/workstation (Fig.1 interaction of dental system including Interface unit and Computer), which is provided for the purpose of passing on signals containing image information,

wherein the interface unit has the following features: at least two inputs (S-video input and X-ray plug-in, paragraph 32-33) for receiving input signals containing image information,

at least two outputs (two S-video output, paragraph 39, Computer monitor 116, Fig.1) for passing on output signals containing image information to one or more displays (video monitor 112, computer monitor 116, Fig.1) connectable with the interface unit and/or to further interface units and

at least one internal transfer unit (Source selection button 314, Fig.3) , for selectively passing on of the input signals (designated where the image is supplied from, paragraph 56) containing image information to the outputs,

and wherein the interface unit further has a processing unit (processors, paragraph 27, computer 114, Fig.1) or conversion of an analog video (analog to digital converters, paragraph 48) input signal into an output signal corresponding to a PC standard (VGA was well-known standard in PC display).

Regarding **claim 2**, Cooper discloses everything claimed as applied above (see claim 1). Cooper further discloses wherein the processing unit (processors, paragraph 27) has on the input side a first conversion block for conversion of the analog video signal into a digital signal (analog to digital converters, paragraph 48).

Art Unit: 2621

Regarding **claim 3**, Cooper discloses everything claimed as applied above (see claim 2). Cooper further discloses wherein the digital signal produced by the first conversion block can be delivered to a processing block for digital processing (freeze frame utility, paragraph 52) of the video signal.

Regarding **claim 4**, Cooper discloses everything claimed as applied above (see claim 2). Cooper further discloses wherein the digital signal produced by the first conversion block, and if applicable processed by the processing block, can be delivered selectively to the first transfer unit or to at least a further conversion unit (inherent in graphics control unit in computer 114, Fig.1) for the generation of a signal corresponding to a PC graphic standard (VGA was well-known standard in PC display 116, Fig.1).

Regarding **claim 5**, Cooper discloses everything claimed as applied above (see claim 4). Cooper further discloses wherein the second conversion unit forms an output signal corresponding to the VGA standard (VGA was well-known standard in PC display).

Regarding **claim 7**, Cooper discloses everything claimed as applied above (see claim 1). Cooper further discloses wherein this has at least two inputs (S-video input and X-ray plug-in, paragraph 32-33) and two outputs (S-video output, paragraph 39, Computer monitor 116, Fig.1) for video signals, and a first transfer unit (Video Source Selection by Membrane Control Unit, paragraph 56) via which the video input signals are selectively passed on to the outputs (designated where the image is supplied from, paragraph 56).

Regarding **claim 12**, Cooper discloses everything claimed as applied above (see claim 1). Cooper further discloses at least one further device in particular a dentist's work and/or examination device,
an input device (Remote control Panel 202, Fig.2) for the generation and wireless transmission of navigation and/or control information for activation and control of functions of the interface unit or of the devices,
and a functional unit (UDS 100, Figs. 1-2), connected upstream of the devices which receives the navigation and/or control information transmitted from the input device and passes it on to the devices.

Regarding **claim 13**, Cooper discloses everything claimed as applied above (see claim 12). Cooper further discloses wherein the interface unit is integrated in the functional unit (UDS 100, Fig.1).

Regarding **claim 14**, Cooper discloses everything claimed as applied above (see claim 12). Cooper further discloses wherein the functional unit passes on the navigation and/or control information transmitted from the input device at least in part in a wireless manner (inherent in Remote control Panel 202, Fig.2) to the devices.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. **Claims 6, and 8-10** are rejected under 35 U.S.C. 103(a) as being obvious over Cooper.

Regarding **claim 6**, Cooper discloses everything claimed as applied above (see claim 5). However, Cooper fails to disclose wherein the digital signal produced by the first conversion block, and if applicable processed by the processing block, can be delivered to a third conversion unit for the generation of an output signal corresponding to the DVI standard.

However, it was well known in the art that many PC have DVI interface which include conversion to DVI (Digital Video Interface) standard, in order to improve quality of display by transmitting digital image signal directly without D/A conversion.

Therefore, given this teaching, it would have been obvious to one of ordinary skill in the art at the time invention was made to modify Cooper to provide DVI interface in the PC, in order to improve quality of display by transmitting digital image signal directly without D/A conversion. The Cooper dental interface unit with workstation, incorporating the DVI interface, has all the features of claim 6.

Regarding **claim 8**, Cooper discloses everything claimed as applied above (see claim 1). However, Cooper fails to disclose wherein at least one input signal is a signal corresponding to a PC graphic standard.

However, it would have been obvious to one of ordinary skill in the art at the time invention was made to modify Cooper to provide wherein at least one input signal is a signal corresponding to a PC graphic standard (VGA), in order to have further improvement of Cooper's video interface unit which enables to select the PC generated

or stored video related dental treatment. The Cooper dental interface unit with workstation, incorporating VGA interface, has all the features of claim 8.

Regarding **claim 9**, Cooper discloses everything claimed as applied above (see claim 8). However, Cooper fails to disclose this unit has at least two inputs and two outputs for signals corresponding to the PC graphic standard and a second transfer unit.

However, it would have been obvious to one of ordinary skill in the art at the time invention was made to modify Cooper to provide at least at least two inputs and two outputs corresponding to VGA, in order to have further improvement of Cooper's video interface unit which enables to select the PC generated or stored video related dental treatment. The Cooper dental interface unit with workstation, incorporating multiple input and output VGA interface, has all the features of claim 9.

Regarding **claim 10**, the Cooper dental interface unit with workstation, incorporating multiple input and output VGA interface, as applied to claim 8, discloses wherein the signals corresponding to the PC graphic standard are VGA signals (VGA was well-known standard in PC display 116, Fig.1).

10. **Claim 11** is rejected under 35 U.S.C. 103(a) as being obvious over Cooper in view of Belvedere (US 2004/0,259,064) (hereafter referenced as Belvedere).

Regarding **claim 11**, Cooper discloses everything claimed as applied above (see claim 1). However, Cooper fails to discloses wherein this unit further has at least two inputs and outputs for audio signals, which in each case are associated with the inputs and outputs for the signals containing image information, and an audio transfer unit via

Art Unit: 2621

which the audio signals at the inputs are passed on to the associated outputs in accordance with the passing on of the signals containing the image information.

In the analogous filed of endeavor, Belvedere discloses Personal Continuing Education Kit for Dentist and Method of Use Therefore. Specifically, Dire discloses dental education kit which demonstrate Audio visual demonstration (paragraph 15) using DVD and Video Tape (paragraph 8), in order to instruct performing the procedure on the model of dental arch (abstract).

Therefore, given this teaching, it would have been obvious to one of ordinary skill in the art at the time invention was made to modify Cooper by providing interface unit with at least two inputs and outputs for audio signals (corresponding to DVD and Video Tape), which in each case are associated with the inputs and outputs for the signals containing image information (inherent in playing audio and video), and an audio transfer unit via which the audio signals at the inputs are passed on to the associated outputs in accordance with the passing on of the signals containing the image information, in order to instruct performing the procedure on the model of dental arch. The Cooper dental interface unit with workstation, incorporating the Belvedere multiple Audio visual sources and source selection switch to output audio corresponding video source, has all the features of claim 11.

11. **Claims 15-18** are rejected under 35 U.S.C. 103(a) as being obvious over Cooper in view of Fillebrown (US 2001/0,053,134) (hereafter referenced as Fillebrown).

Regarding **claim 15**, Cooper discloses everything claimed as applied above (see claim 14). However Cooper fails to disclose wherein the functional unit has a master

Art Unit: 2621

module for wireless communication with the devices whereby there is associated with the devices in each case a slave module which passes on the information received from the master module to the associated device.

In the analogous filed of endeavor, Fillebrown discloses Router for a Personal Wireless Network. Specifically, Fillebrown discloses a master module (master, paragraph 23) for wireless communication with the devices whereby there is associated with the devices in each case a slave module (slaves, paragraph 13) which passes on the information received from the master module to the associated device, in order to send and receive video and audio with flexibility (paragraph 17).

Therefore, given this teaching, it would have been obvious to one of ordinary skill in the art at the time invention was made to modify Cooper by providing wireless network with master module in the server PC and slaves in other audio visual devices, in order to send and receive video and audio with flexibility. The Cooper dental interface unit with workstation, incorporating the Fillebrown wireless network with master module in the server PC and slaves in other audio visual devices, has all the features of claim 15.

Regarding **claim 16**, the Cooper dental interface unit with workstation, incorporating the Fillebrown wireless network with master module in the server PC and slaves in other audio visual devices, as applied to claim 15, teaches wherein the slave modules (PC on wireless network other than master) are integrated in the respective devices or connected with these via an RS232 interface (it was well known that mouse is interfaced to RS-232) and/or a PC interface.

Art Unit: 2621

Regarding **claim 17**, the Cooper dental interface unit with workstation, incorporating the Fillebrown wireless network with master module in the server PC and slaves in other audio visual devices, as applied to claim 12, teaches wherein the functional unit further stands in connection with a server (master module in the server PC), wherein there is effected an exchange of data (send and receive video and audio with flexibility, paragraph 17) between the server and the devices via the functional unit.

Regarding **claim 18**, the Cooper dental interface unit with workstation, incorporating the Fillebrown wireless network with master module in the server PC and slaves in other audio visual devices, as applied to claim 17, discloses wherein the functional unit is connected with the server via a USB interface (Cooper: USB port, paragraph 37).

12. **Claims 19-21** are rejected under 35 U.S.C. 103(a) as being obvious over Cooper in view of DiRe (US 2004/0,007,907) (hereafter referenced as DiRe).

Regarding **claim 19**, Cooper discloses everything claimed as applied above (see claim 12). However, Cooper fails to discloses wherein the input device has:

a first input element for the generation of navigation information for the control of a pointer on a user interface which is represented on a display of the dentist's treatment station,

at least a second input element for the generation of control information with which functions of the devices are selectable and/or activatable independently of the navigation information generated by the first input element,

Art Unit: 2621

transfer means for the wireless transmission of the navigation and control information generated with the aid of the first and second input elements to the devices or to a functional unit connected upstream of the devices.

In the analogous filed of endeavor, DiRe discloses Chair-Side Multimedia Communication System. Specifically, Dire discloses wherein the input device has: a first input element for the generation of navigation information for the control of a pointer on a user interface which is represented on a display of the dentist's treatment station(Fig.1-3 #42, Fig.4, [0025] "all choices are on the desktop display on the screen 42 and accessible with ... point-and click type "), at least a second input element for the generation of control information ([0018]: control of the volume of the speakers 38 is done by user via control pad 40") with which functions of the devices are selectable and/or activatable independently of the navigation information generated by the first input element,

transfer means for the wireless transmission (wireless keyboard or mouse, Fig.3) of the navigation and control information generated with the aid of the first and second input elements to the devices or to a functional unit connected upstream of the devices (Fig.1,3: #40), in order for the multi-media system to be useful in both dental treatment and entertainment of the patient (paragraph 25-27).

Therefore, given this teaching, it would have been obvious to one of ordinary skill in the art at the time invention was made to modify Cooper to provide the user interface for the navigation of the pointer and control with wireless mouse or keyboard, in order for the multi-media system to be useful in both dental treatment and entertainment of

Art Unit: 2621

the patient. The Cooper dental interface unit with workstation, incorporating the Dire user interface for the navigation of the pointer and control with wireless mouse or keyboard, has all the features of claim 19.

Regarding **claim 20**, The Cooper dental interface unit with workstation, incorporating the Dire user interface for the navigation of the pointer and control with wireless mouse or keyboard, as applied to claim 19, discloses wherein the control information generated via the second input element can be employed for the control of the at least one device independently of a unit administering the user interface ([0018]: control of the volume of the speakers 38 is done by user via control pad 40”).

Regarding **claim 21**, The Cooper dental interface unit with workstation, incorporating the Dire user interface for the navigation of the pointer and control with wireless mouse or keyboard, as applied to claim 20, discloses wherein the first input element has a navigation element for the generation of two- dimensional navigation information (Dire: navigation of the website, paragraph 9) and at least two selection keys (mouse or keyboard, fig.3, has more than two keys) for the generation of supplementary selection information.

13. **Claims 22-28** are rejected under 35 U.S.C. 103(a) as being obvious over Cooper in view of Dire , and further in view of Hayduk (US 2003/0,054,833) (hereafter referenced as Hayduk).

Regarding **claim 22**, Cooper and Dire disclose everything claim as applied above (see claim 21). However they fail to disclose wherein the navigation element is a joystick.

In the analogous filed of endeavor, Hayduk discloses Application Execution Method and Apparatus. Specifically, Hayduk discloses wherein the navigation element is a joystick (joystick 246, Fig.2), in order to do selection by navigation.

Therefore, given this teaching, it would have been obvious to one of ordinary skill in the art at the time invention was made to modify Cooper and DiRe to provide joystick, in order to do selection by navigation. The Cooper dental interface unit with workstation, incorporating the Dire user interface for the navigation of the pointer and control with wireless mouse or keyboard, further incorporating the Hayduk joystick, has all the features of claim 22.

Regarding **claim 23**, the Cooper dental interface unit with workstation, incorporating the Dire user interface for the navigation of the pointer and control with wireless mouse or keyboard, further incorporating the Hayduk joystick, as applied to claim 22, discloses wherein the joystick can be pressed down for the generation of a supplementary item of selection information (selector element can be combined into a single selection service, paragraph 21, and also it was well-know that joystick includes the push-button selection switch).

Regarding **claim 24**, the Cooper dental interface unit with workstation, incorporating the Dire user interface for the navigation of the pointer and control with wireless mouse or keyboard, further incorporating the Hayduk joystick, as applied to claim 22, teaches wherein in a menu mode the functioning of the navigation element is blocked, and solely the selection information can be generated with the aid of the selection keys (it was well known that Keyboard has arrow keys in numerical pad).

Regarding **claim 25**, the Cooper dental interface unit with workstation, incorporating the Dire user interface for the navigation of the pointer and control with wireless mouse or keyboard, further incorporating the Hayduk joystick, as applied to claim 22, discloses wherein the second input element is formed by a function key field having a plurality of function keys (DiRe: Control Pad, Fig.1).

Regarding **claim 26**, the Cooper dental interface unit with workstation, incorporating the Dire user interface for the navigation of the pointer and control with wireless mouse or keyboard, further incorporating the Hayduk joystick, as applied to claim 25, discloses wherein a part of the function keys is provided for control of the interface unit (Cooper: Operating Membrane Panel, Fig.3).

Regarding **claim 27**, the Cooper dental interface unit with workstation, incorporating the Dire user interface for the navigation of the pointer and control with wireless mouse or keyboard, further incorporating the Hayduk joystick, as applied to claim 26, discloses wherein a part of the function keys is provided for selection of a video image source intended for representation on a display (Cooper: Source select button 314, Fig.3).

Regarding **claim 28**, the Cooper dental interface unit with workstation, incorporating the Dire user interface for the navigation of the pointer and control with wireless mouse or keyboard, further incorporating the Hayduk joystick, as applied to claim 26, discloses wherein a part of the function keys is provided for the selection of an image signal corresponding to a PC graphic standard, in particular corresponding to the

Art Unit: 2621

VGA standard (VGA was well-known standard in Cooper: PC display 116, Fig.1), intended for representation on a display.

Conclusion

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to HEE-YONG KIM whose telephone number is (571)270-3669. The examiner can normally be reached on Monday-Thursday, 8:00am-5pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marsha Banks-Harold can be reached on 571-272-7905. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/HEE-YONG KIM/
Examiner, Art Unit 4192

Application/Control Number: 10/575,150
Art Unit: 2621

Page 17

/Andy S. Rao/
Primary Examiner, Art Unit 2621
June 25, 2010